



(Left) An Alvis Pelides engine was among the exhibits demonstrating the uses of the United Steel Companies' products. (Right) Telling the story of National Benzole.

*Imperial Chemical Industries, Ltd. (Degreasing), Imperial Chemical House, Millbank, London, S.W.1 (D.305).*—Oil, grease, swarf and polishing compounds disperse as at the wave of a magic wand when an I.C.I. degreasing plant is switched into life, paving the way for enamelling, electroplating, painting, lacquering, rust-proofing or overhaul.

The most recent departures in degreasing technique are represented on D.305. Blackburn, Fairey and Handley-Page are satisfied users of I.C.I. equipment.

*Imperial Chemical Industries, Ltd. (Heat Treatment), I.C.I. House, Millbank, London, S.W.1 (D.206).*—Such illustrious names as Bristol, Hawker, Fairey, De Havilland, Westland, Airspeed, Napier, Phillips and Powis and Parnall are on the I.C.I. scroll as users of the "Cassel" heat treatment process.

Case-hardening, as perfected by the Cassel Cyanide Co., Ltd. (a subsidiary of I.C.I.), gives steel prolonged resistance to abrasion and shock. The process, of course, increases the carbon content of the surface layers of the steel, leaving the core in its original soft, tough condition. "Cassel" salt baths are, if anything, even more commonly used than the heat treatment processes.

*Incandescent Heat Co., Ltd., Smethwick, Birmingham (D.603, 502).*—This firm can arrange to give anything a suitably hot time; general heat treatment furnaces are found in several forms, while for the aircraft industry Metaelectric alloy crucible furnaces and recirculated atmosphere tempering equipment are specialties.

Gas-fired furnaces for light metals and furnaces for all classes of annealing, hardening, carburising, etc., may be seen under the name of Incandescent Heat or the associated companies, Controlled Heat and Air, Selas Gas, and Metaelectric Furnaces.

*London Aluminium Co., Ltd., Westwood Road, Witton Road, Birmingham (A.411 and 310).*—Spinings and pressings in aluminium and alloys are the main items calculated to interest the aircraft industry in the London Aluminium display.

The chromium plating and anodised finishes likewise command attention. Facilities are available at the company's Birmingham works for producing spinings up to 5ft. 6in. in diameter, which

is an outsize so far as the aircraft trade is concerned.

*Metropolitan-Vickers Electrical Co., Ltd., Trafford Park, Manchester, 17 (Cb.220).*—"Metrovic" designers were lately called upon to develop an r.p.m. indicator for G.W.R. express locomotives. Vibration presented some stiff problems, but an effective indicator was evolved and may form the basis for similar applications to aircraft.

More prosaic are the 2½in. moving-coil ammeters and voltmeters supplied in quantity to the Air Ministry. Several items in the array of industrial electrical gear have aeronautical potentialities, as has their welding equipment.

*Moseley, David, and Sons, Ltd., Ardwick, Manchester (D.630).*—Looking at the apparently limitless array on this stand, one is moved to wonder how our forefathers ever got along without rubber, even if life in their day was simpler and less governed by machinery.

The production of rubber hose is an industry in itself, and everything from the thinnest extruded garden hose to reinforced large-diameter fire hose is produced by David Moseley. In a different class are rubber mountings for engine-

bearer feet and, again, rubber mouth-pieces and speaking tubes for aircraft.

*Philips Industrial (Philips' Lamps, Ltd.), 145, Charing Cross Road, London, W.C.2 (Cb.712).*—One can learn a tremendous lot on Stand Cb.712 about the conversion of A.C. to D.C. Philips research workers have introduced a new metal-clad rectifying valve which, they emphatically maintain, is the best method of producing D.C. to date. The range of arc welding plant and electrodes embraces a welding rectifier intended for the welding of sheet metal down to 22 S.W.G.

*Sir Isaac Pitman and Sons, Ltd., 12-14, Newton Street, High Holborn, London, W.C.2 (Cb.115).*—Rendezvous for students, the Pitman sanctum features the justly famed series of textbooks for the which the firm is held in high esteem among all sorts and conditions of aircraft workers.

Any exaggerated idea of the importance of aeronautics in world affairs is effectively dispelled by a glance at the works devoted to other themes.

*Priestman, T. J., Ltd., Birmingham (D.509).*—A miser's dream of heaven—on this stand, on every side, are shining heaps of gold and silver. In truth, these metal ingots are bronzes and brasses, aluminium alloys, and bearing metals, but are no doubt as valuable in their particular duties as the precious metals which they resemble.

All types of notched bars, billets and rolling slabs are prepared to Admiralty, Air Ministry and B.S.I. specifications.

*Revvo Castor Co., Ltd., Archdale Works, Blechynden Street, London, W.11 (D.331).*—Since a bearded sportsman put a round tree trunk under his bulky game to help him get it back to his naturally formed air-raid shelter people have devoted a good deal of energy to developing better forms of wheels.

The Revvo people make little wheels do a lot of work in several directions (literally) and show ball-bearing examples applicable to all manner of purposes.

*The Reynolds Tube Co., Ltd., Hay Hall Works, Tyseley, Birmingham (D.623 and 522).*—Manufacturers with "tubular" troubles will do well to get a prescription at one of the Reynolds "clinics." The Reynolds high-strength



A house in shining sheet—the Firth-Vickers "Staybrite" exhibit.